Fragile to Agile

Withstanding uncertainty as an adaptive organization

FUJITSU

Part 2

shaping tomorrow with you

Contents

Foreword

"The only constant in life is change"
– Heraclitus

Despite it being some 2,500 years since the Greek philosopher Heraclitus uttered these famous words, their meaning still carries the same weight today. In particular, change emerged as one of the many buzzwords in 2021, as the world was subject to widespread transformation at the hands of COVID-19.

A key lesson from the crisis has been the necessity – especially for businesses and government organizations – to embrace change. With the unstable economic landscape causing uncertainty to be a way of life, business as usual no longer applies. In response, organizations must be able to prepare for and respond to major disruptions, and there is a need to adapt constantly to remain relevant and keep up with the market.

At a recent CIO Advisory board meeting, one topic that was front of mind for CIOs was the necessity to build adaptability into all areas of the organization in order to navigate and respond to unpredictable and volatile market conditions. Being able to continuously evolve at pace is essential to not just to survive, but thrive in times of severe disruption.

Ultimately, businesses and government organizations need to ensure they future-proof and digitally transform their enterprise. But the pandemic has forced the hand of many businesses to embrace transformation at short notice – and this has not been without its challenges. In particular, organizations have reported technical and organizational debt to be one of the biggest obstacles to becoming adaptive, and driving the digital projects that are capable of making an adaptive organization a reality.

Today, as the world prepares for a life beyond COVID-19, this remains a clear issue for businesses and government organizations, as they acknowledge the difficulties in addressing these areas. But at the same time, they also recognize the need to act now to build organizational infrastructures, processes and supply chains for the future. Failure to do so will not only threaten their ability to innovate but their ability to survive.

The report that follows offers research and interesting insights on these challenges and more, combined with our expert advice on how to overcome them. We hope you enjoy reading it.

For more information or guidance, don't hesitate to get in touch.

Brad Mallard
CTO for Digital Technology Services,
Fujitsu Europe

Executive summary

We conducted a global survey of 750 IT decision-makers and line of business stakeholders with the aim of finding out how businesses are adapting to the challenges of both today and tomorrow.*

In our first report, we focused on the first two of our four main insights:

- When faced with changing customer expectations, be aggressive or be at risk
- To survive, organizations must democratize and decentralize

In this report, we'll be focusing on the other two key takeaways from that research:

- Out with the old: paying back technical and organizational debt is critical to delivering real value
- Every business needs to be a tech business, but not all have the skills and resources to succeed

To find out more on the first two insights, read the first report here.

Last year, businesses and government organizations across the globe were put through a crash course in the importance of pace, agility and rapid innovation. Since the initial shuttering of establishments to help stem the spread of the COVID-19 virus, businesses have been struggling to keep up with the increasingly uncertain economic landscape. As such, features like remote working capabilities and access to cloud services have become integral to the continuation of operations.

Today, as the light at the end of the tunnel grows brighter and businesses prepare themselves for the post-pandemic reality, every leader knows the only way to thrive in this new economy is to future-proof their enterprises against all kinds of disruption. And to achieve this, they must digitally transform their enterprises so they're capable of adapting and responding iteratively at rapid pace.

This is what it means to be adaptive, and it is (or at least should be) the goal of every organization. However, while everyone understands the case for an adaptive organization, becoming one is a lot easier said than done.

That's because for many, organizational and technical debt is a millstone around their necks, preventing them moving at the pace they need to. Layers and layers of legacy systems, technology and redundant processes that have built up over the years and are weighing businesses down, restricting their ability to innovate and rendering them inflexible.

It has become such a pervasive problem that most leaders believe that only a total scrapping of their technical and organizational debt will unlock their business strategies and enable their success.

But legacy technologies and processes aren't the only factors stifling growth. To be an adaptive organization today means being digital-first. That means prioritizing digital channels, embracing continuous change and placing technology-enabled customer and employee experience above all. To truly achieve this status, organizations not only need to have the right technology in place, but have a skilled workforce capable of driving this digital transformation forward.

It's a difficult balancing act for leaders, as most of them know people and processes are just as important as software and systems when it comes to making a digital-first business. So only by addressing both priorities together can that goal be achieved.

*Fujitsu conducted a global survey of 750 IT decision-makers and line of business stakeholders in January 2021 across the UK&I, Germany, Finland, North America, Australia and Japan through independent third-party research company Coleman Parkes with the aim of finding out how businesses are adapting to the challenges of both today and tomorrow.

Chapter 1: “Out with the old: paying back technical and organizational debt is key to delivering real value”

Technical debt – too complex to handle?

There’s no denying that we’re living in an age when the pace of innovation is moving at breakneck speed. And there are certainly advantages to this pace – continuous technological advances force organizations old and new, big and small, to innovate and adapt to remain competitive.

Challenger startups can emerge overnight to disrupt entire industries. Meanwhile, new opportunities to optimize processes or elevate experiences for customers and employees present themselves every day. We talked a lot more about the importance of pace when dealing with uncertain times in our last report.

However, all this pace and change has left many enterprises with a skeleton in their closet – one that’s inhibiting them from becoming more adaptable and delivering the digital transformation projects that’ll keep them competitive.

That skeleton is technical debt.

Technical debt is a side effect of living through these rapidly changing times and is what happens when organizations prioritize short-term solutions over long-term planning.

Often, external pressures such as the need to provide enhanced customer experiences lead enterprises to rapidly adopt new technology. Or they might implement new technologies because they’re cheaper, better than what they currently have or are the only option available at that point in time.

While these may offer the quick-fixes these organizations need at the time, in the long-term these hastily integrated innovations end up causing problems.

Because while these short-term solutions may not be inherently bad, the accumulation of “unpaid” technical debt receipts can, over time, become a ball and chain that slows down a business’ ability to innovate by creating cumbersome levels of internal complexity.

What exactly creates technical debt can be somewhat complicated to nail down. When we asked leaders this question, external market forces such as COVID-19 (50%) and digital transformation (46%) played a significant role for them. However, these leaders recognize internal decisions are a key contributor of technical debt too, with 43% of respondents pointing to actions such as adopting new software without removing or replacing outdated IT suites as the cause.

The problem with technical debt, however, isn’t just that it can be bad for business – it’s also incredibly complicated to resolve.

A staggering 45% of leaders say they simply find technical debt too complex to even attempt to tackle, despite being fully aware of the impact it can have on their organization’s very survival. And the negatives don’t stop there; almost half (49%) say it leads to unnecessary costs and 48% believe it hinders innovation and agility. Some 44% even went as far to say it can make an organization unfit for new market conditions.

This makes technical debt a particularly insidious problem for businesses – and one that will only get progressively worse if steps aren’t taken to resolve it.

Technical debt costs valuable resources

Another lens to view the challenge of accruing technical debt is by business size. Technical debt, much like other factors that worsen organizational complexity, grows exponentially with the size of a firm.

For every hour an IT team spends on developing new features, products or services that go towards helping grow and progress the business, decision-makers say their teams spend an additional 2.7 hours on average accounting for technical debt.

Because these debts soak up so much of these organizations' resources and time in just trying to keep the lights on, it makes it harder for them to focus on more value-add activities. Almost half (49%) agree that their current technological set up is either somewhat or significantly impeded by their technical debt. In fact, only 7% of respondents say their current systems allow them to make decisions and act very quickly in their job.

This can sound quite paradoxical; if it's legacy technology that's proving to be such a hinderance, why don't these organizations simply get rid or move away from it? Well, that's exactly what 54% of them believe they must first do for their business strategies to ever be a success. However, that in itself is an ongoing challenge.

For many of our respondents (45%), the amount of technical debt they've accrued in the form of layer upon layer of legacy technology is now simply too complex to untangle or update. Plus, for most IT decision-makers, navigating the pandemic and its financial implications needs to take priority. Other top challenges to eradicating technical debt are also internal in nature; budget constraints (27%), lack of internal expertise and knowledge (27%) and process complexity (26%).

And it's not as if IT leaders aren't incentivized to get a handle on their technical debt. Most of them acknowledge the plethora of opportunities that would be unleashed if they could make progress with their technical debt problems. From improved agility (32%) and reduced security risk (31%) to an increase in competitive advantage (28%) and employee wellbeing (27%), there's plenty to motivate them.

Fujitsu expert view

"Technical debt is a very real challenge for organizations as they strive to compete and engage in the digital era. Technical debt drains resources, budgets and skills at a time when companies need to focus resources on developing innovative services to deliver new customer experiences and drive differentiation in the market. Technical debt has developed over time – as we've layered technology and services on top of each other and grown organically, risk, duplication and technical complexity have added cost and inertia into the heart of our businesses. These long term problems cannot be ignored indefinitely and organizations know they need to address technical debt to become digital-first. 53% of companies say they invest too much in keeping the lights on and not enough planning for the future. The old systems do not lend themselves to adaptability. Businesses need to be able to make fast decisions based on current data and be responsive to their customers using newer technologies and tools.

The issue is trickier than replacing technology, as this is embedded or hard-wired into the organization, underpinning processes, systems and policies that are as ineffective as the technology itself. What's more, the pandemic highlighted the importance of removing points of failure and building resilience in the business infrastructure and supply chains. If organizations do not address this, it could be a threat to their survival and leave them open to attacks from disruptors."

Tristan Rogers
Head of Strategy and Portfolio
Applications and Multi-Cloud services, Fujitsu Europe

Organizational debt weighs down business performance and adds complexity

It's not just technical debt that organizations unintentionally build up. Over time, enterprises create more roles, rules and policies, which, like technical debt, can end up becoming fixed internal features even after they've stopped serving any useful function. Often these and other norms are introduced by businesses in a bid to get a better handle on their worsening complexity levels that their legacy systems have helped breed. But in the long term, they too end up contributing to that complexity which is known as organizational debt.

And as the world continues to change and organizations' internal processes evolve, historical, cultural and operational structures end up creating unnecessary costs to the organization.

Today, half of businesses consider organizational debt to be the proverbial 'elephant in the room' – everyone knows it's there, but no one wants to talk about it.

That's because as enterprises continue to ramp up their pace of digital transformation, the consequences of organizational debt become harder to do anything about, so it's easier to just ignore it and accept it as the status quo.

But more than half (55%) of our respondents say the operational issues created by the sheer pace of their digital transformation projects are now hindering their ability to do their jobs.

And in disruptive and uncertain times like these, it's not all that surprising that more than half **(53%) of respondents admit they invest far too heavily in 'keeping the lights on' and not enough on planning and developing for the future.**

Much like technical debt, **most leaders (64%) believe eradicating or automating these long-established, redundant processes is integral to the success of their business strategy.**

Organizational debt also creates additional risk by complicating the decision-making processes (a key factor 60% of business leaders agree with). This only makes it harder for organizations to respond to new market conditions (according to exactly half of those surveyed).

Fundamentally, both organizational and technical debt result in inefficiency – the enemy of agility. This makes it impossible for these businesses and government bodies to become as adaptive as they long to be, so it's no coincidence that issues around efficiency feature as the top risks around organizational debt. Others include pace of transformation (31%), innovation (28%), and ability to compete (27%).

Fujitsu expert view

"Organizational debt - closely linked to technical debt - has accumulated and expanded over the years as businesses have grown. There is an awareness it needs addressing, but how? It's complex. Organizational and technical debt cannot be tackled in isolation. It's not a simple ask.

Organizational debt, covering internal policies, systems and procedures, create operational issues and inhibit digital transformation. Organizational and technical debt are two sides of the same coin and must both be addressed, in tandem, to be successful. An adaptive organization can assess and respond in a timely, tactical and iterative manner. Three quarters of business leaders interviewed agree that in a digital-first organization, people and processes are just as important as the software and systems. They can use technology to help with the processes, with 69% saying they need to increase business process automation."

Tristan Rogers
Head of Strategy and Portfolio
Applications and Multi-Cloud Services, Fujitsu Europe

Debt, pace and not meeting customers' needs

No organization can afford to underestimate the impact of pace if they want to survive our rapidly changing world. The most popular definition of "pace" our respondents gave is an organization's ability to innovate products or services to meet customer needs (39%). This is crucial because, as we found out in the first part of our report, 41% of leaders say their customers' needs are changing within weeks at a time.

So, digital transformation relies on pace, both in decision-making and in the driving of innovation. But when every decision needs to navigate a web of red tape and bureaucracy before being reached, developing new products and services becomes an arduous process.

With this important resource-heavy challenge slowing many organizations down and highlighting the need to 'do more with less', most are prioritizing initiatives that aim to increase operational agility and optimize business processes. Because for every hour that a line of business team spends on a new idea or way of working, leaders say their teams spend an additional 2.3 hours on average accounting for organizational debt, according to our research.

Organizations can't avoid the problem forever, not if they want to do more than survive. Plus, there are real benefits to initiatives that target operational agility and process automation.

For every hour that a line of business team spends on a new idea or way of working, leaders say their teams spend an additional **2.3 hours** on average accounting for organizational debt.

Fragile to Agile: Overcoming technical debt as an adaptive organization

> Out with the old: paying back technical and organizational debt is key to delivering real value

50%

of businesses consider organizational debt the 'elephant in the room' – everyone knows it's a problem but are reluctant to address it

2.7hrs

For every hour IT teams spend on developing new features, nearly three times as man are spent accounting for technical debt

7%

say their current systems allow them to make decisions and act very quickly in their job

Primary causes of technical debt:

- External market forces such as the COVID-19 pandemic — 50%
- Too much time spent on 'keeping the lights on' — 48%
- Digital transformation — 46%
- New market conditions — 44%
- Adding new software without removing old software — 43%

Leaders know technical debt can impact business survival.

49% of businesses say their dependency on old technology causes unnecessary cost

48% of businesses say technical debt hinders innovation and agility

If technical debt is addressed, what are the top opportunities unleashed for businesses?

- Organizational agility — 32%
- Reduced security risk — 31%
- Increase competitive advantage — 28%
- Employee wellbeing — 27%

Chapter 2:
"Every business needs to be a 'tech' business, but not all have the skills and workflows to succeed"

Businesses want to be digital-first

We've been living in the age of platform businesses and digital-natives for some time now, with numerous start-ups (and more popping up every day) finding immense success by orienting their business model towards being digital-first or digital-only, something that can only be achieved through modern applications and technology innovation.

This paradigm shift has lit a fire underneath established organizations as they race to keep up with the desirable experiences that digital-first companies offer in order to maintain relevance and market share.

For most organizations (65%), becoming digital-first is such a priority, it's seen as a matter of survival. We define a digital-first business as one that prioritizes digital channels, embraces continuous change and puts the technology-enabled customer and employee experience first. So it's no wonder 70% of respondents agree that becoming digital-first offers more opportunities than the traditional models of operating.

However, despite the clear value of digital-focused business models, most organizations (64%) recognize the difficulties and complexities of implementing the necessary processes and ways of working that will allow them to reach their desired future state. This is particularly true when considering the levels of organizational debt that might exist, as explored in chapter one.

When you add to the mix a chronic modern technology skills shortage, **it's understandable that most leaders (71%) believe becoming digital-first requires a re-balancing of investment; spending just as much time, resource and effort in developing people and processes as they do in new systems and software.**

Fujitsu expert view

"To remain competitive beyond 2021, organizations need to invest in new ways of working, tools and digital skills to encourage cross-organizational collaboration – and then couple this with access to an increased availability of data to drive enterprise-wide change and build enterprise adaptability.

Organizations can use technology to help with processes (organizational debt), but 60% of organizations say they need to increase business process automation, while at the same time invest in new skills and re-skill the workfroce to become digital-ready."

Brad Mallard
CTO for Digital Technology Services, Fujitsu Europe

Solving the technology skills gap

As mentioned in the previous sections, while technology might be driving change, there's an understanding that it will always be people – the right employees with the right skill sets – that will make the difference in organizations.

Specifically, when it comes to ramping up pace to keep up with customer demand, **71% of respondents recognize they need to rapidly accelerate their development of digital products, services and features in line with changing demands.** This can be achieved through skilled multi-platform and multi-lingual development practices (an approach 70% of respondents agree with). These capabilities are acquired through upskilling initiatives and new talent but, for many organizations, this demand is greater than the available supply.

Yet, despite this overwhelming acknowledgment, closing the technology skills gap is more of an ambition and less of a reality due to the range of skill sets that are increasingly difficult to come by.

Many businesses are attempting to balance two opposing courses of action: firstly looking for talent with the skills to drive digital transformation, and secondly for those who are also able to run and integrate the skills and policies necessary to ensure legacy ecosystems can continue to deliver value for the organizations.

So, unsurprisingly, more than half (51%) of respondents say their technology skills gap has increased over the past twelve months. And worse yet, 47% also say they don't have the right tools in place to support their own initiatives to become digital-first.

Compounding this is the fact that organizations are much more affected by cybersecurity (28%) and digital strategy (28%) skill shortages than they are by a lack of more generalist skill sets such as customer service or project management (both 21%). So, sourcing talent with skills in the former will likely be the focus for most organizations. However only one-in-four (26%) businesses say they're affected by a lack of technology integration skills between old legacy tech and new tech.

While this might paint a bleak picture of the immediate future, it's important to appreciate that organizations have ambitious long-term plans. The majority (66%) say they understand their technology skills gap and almost as many (63%) have a strategy in place to bring those skills in line with their lofty digital transformation goals.

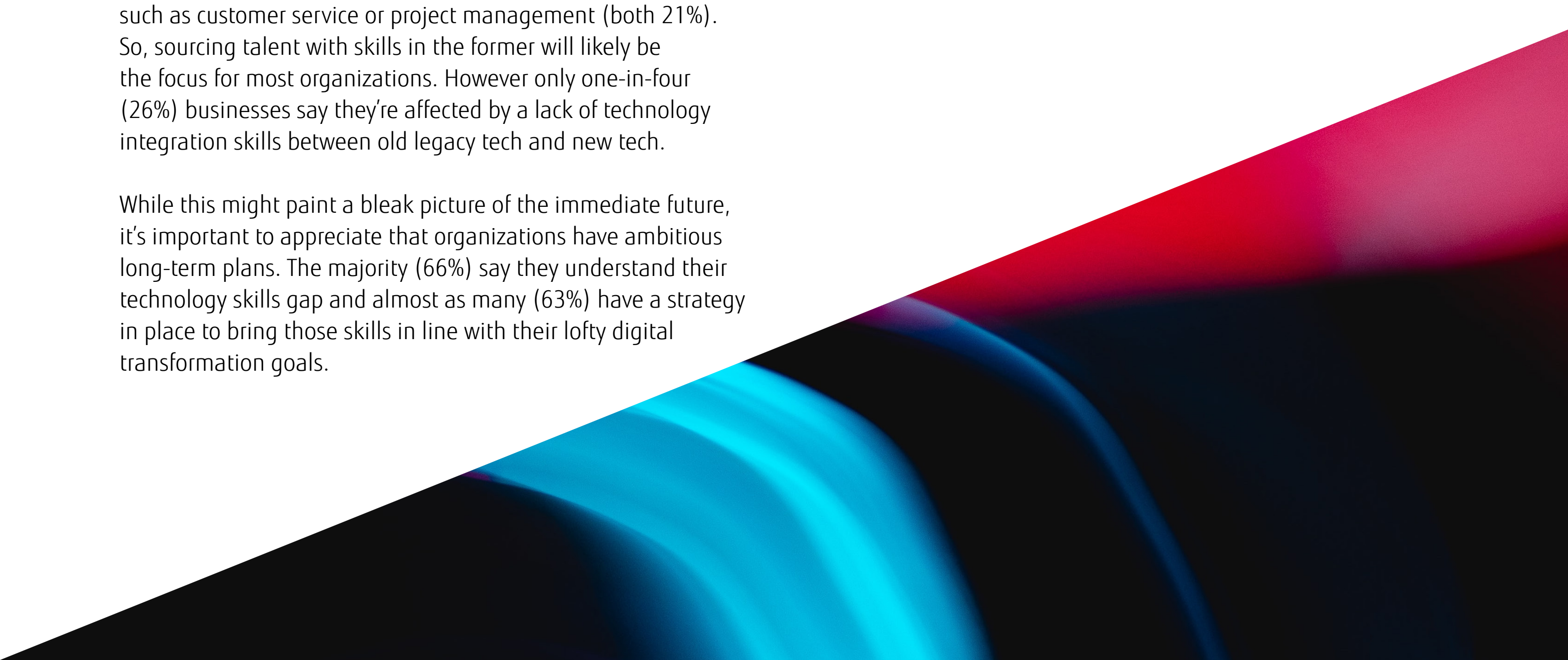
Fujitsu expert view

"Organizations recognize that to survive the pandemic and navigate future disruptions their people play a major role as customer fanatical 'change makers'. In an adaptive organization, people are empowered to make decisions and create processes that allow them to deliver customer experiences by having the right access to the skills, tools and data.

75% of companies tell us that they recognize the skills gap is getting bigger, however they have a strategy in place to address it and see people as playing a key role in building and sustaining an organization's adaptability. It's a steep hill to climb, which needs to be ascended fast as the skills needed are in high demand, with customers now demanding newer digital experiences.

Organizations need to invest not only in innovation and closing that gap but also freeing up capacity in the organization from legacy operational debt to fund future-focused initiatives, otherwise they will inevitably struggle."

Brad Mallard
CTO for Digital Technology Services, Fujitsu Europe



But the technology landscape is a constantly shifting one, with new hurdles erected every day. For example, more than half of businesses (57%) say the proliferation of cloud platforms has left them struggling to keep their skills up to date.

That means matching customer and competitor pace requires businesses to be committed to continuous learning. This has never been more important than now, so it's encouraging that more than two-thirds (68%) affirm that they're committed to a continuous learning cycle to keep staff up to date.

Fujitsu expert view

"People are at the heart of an organization's ability to respond to disruption. But with changes in working practices, new skills and tools needed for collaboration and increased dependence on data for decision-making and designing new experiences, this is all putting pressure on the need for talent with the relevant skills.

Organizations also expect existing roles to adapt and take on new digital skills. People at the front-end will be required to work more closely with technology and digital experts using collaboration tools to rapidly develop new solutions.

The changes in skills needed continue to evolve and point towards a bigger opportunity around a culture of learning and increasing digital literacy across the organization. Ultimately, employees are required to be more digitally savvy with the using and analyzing of data, which will increase the demand for strategically aligned skills as highlighted in the research.

Brad Mallard
CTO for Digital Technology Services, Fujitsu Europe

Bringing business processes in line with digital transformation goals

It's no understatement to say that COVID-19 has had a significant impact on the economy and everyday work models. Most businesses (68%) say that introducing remote working practices forced them to modernize their processes. But while the pandemic was certainly a fierce catalyst for change, most business leaders say that it was high time for this type of change anyway, as it's the clearest path towards greater productivity and well-being, as well as making them better at attracting and retaining talent.

The two most popular paths business leaders see to modernization are firstly through redesigning their traditional structures and processes to boost their agility (65%). The second is by implementing new processes that help improve productivity (64%).

In fact, almost two-thirds (63%) have a strategy in place to bring their business processes in line with their digital transformation plans through the re-engineering of internal processes by making them more intelligent. And fueling this confidence is automation.

By increasing automation within their business processes and investing in better workflow technologies, almost 70% business leaders believe their organizations will be able to get things done quicker and make decisions faster (which chimes with the 64% that say they think eradicating long-established processes is key to a successful strategy in chapter one.

64% agree with this sentiment and believe their organization needs to invest in workflow technologies – from project management tools to customer experience software – to move with greater speed and efficiency.

Changes in working practices that have been spurred on by the crisis will only continue as we enter the post-pandemic phase, with improving communication (37%) and automating processes (36%) via technology having the biggest positive impact on organizations. The process of shedding years of technical and organizational debt to become a truly digital-first company isn't going to be easy. But it is possible.

> Every business needs to be a ‘tech’ business, but not all have the skills and workflows to succeed

70%

of business leaders agree that becoming a digital-first business offers more opportunities than those that operate traditionally

71%

say becoming digital-first means matching investment in software and skills with employee autonomy and opportunity to innovate

74%

of businesses leaders agree that people and processes are just as important as software and systems in a digital-first business

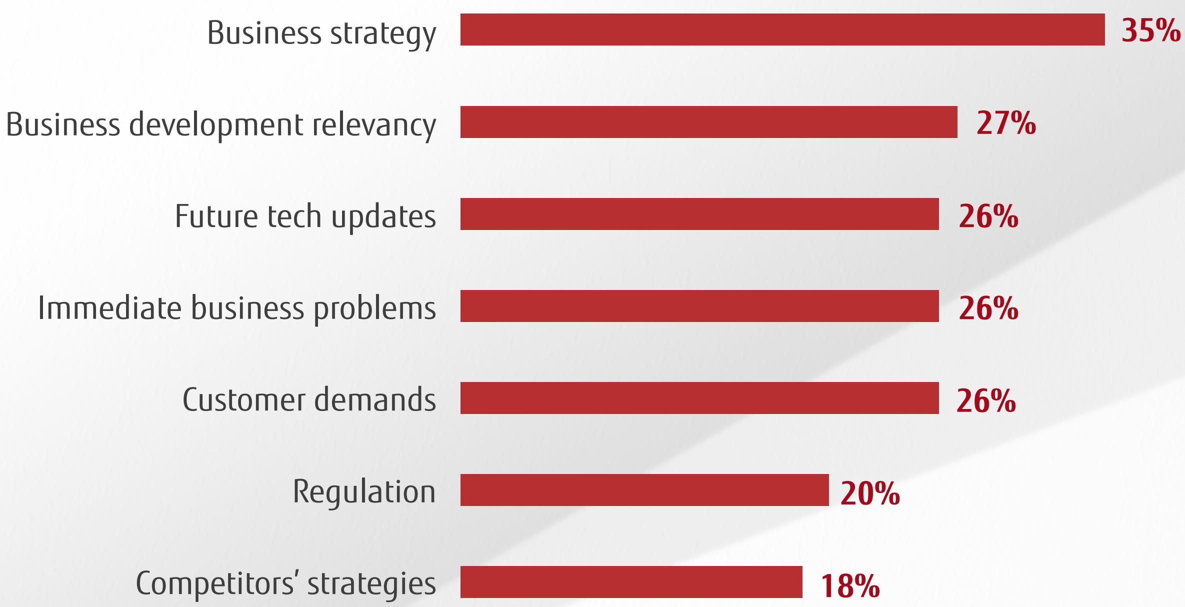
1 in 2

say their technology skills gap has increased over the past twelve months

47%

of businesses say they don’t have the skills in place to support their initiatives to become digital-first

What influences global skills priorities?



Industry highlights

Financial Services

Perhaps more than any other, the financial services sector tends to define success by its ability to innovate at pace. While this has historically given the sector an edge over many other industries, it has also made it incredibly susceptible to accruing organizational and technical debt.

Financial services respondents were most likely to agree that their organization's dependency on old technology causes them unnecessary costs and suffering. As much as four out of every five respondents from the sector agree that the only way for their business strategies to be successful is to eradicate their long-established organizational processes. IT teams in this sector spend the most time (2.9 extra hours on average) accounting for every hour spent developing new features, products or services.

And the pandemic has only worsened these internal complexity levels for financial services, with 54% of them agreeing that responding to COVID-19 challenges quickly caused them to sacrifice best practices when implementing technology and new business practices. They were also most likely to report investing too heavily in 'keeping the lights on' (58%).

For respondents in this sector, the top risks to not shedding outdated technology were losing the ability to transform at pace (41%), reduced ability to use advanced data analytics (39%) and an inability to keep up with increasingly sophisticated security threats due to the vulnerabilities of their legacy systems (38%).

Yet despite the challenge it presents, financial services organizations also see the most opportunity in adopting digital-first business models, something it was also most likely to view as a matter of survival. This aligns with the overwhelming belief in the sector that organizations that don't prioritize technology investment are at risk of losing customers and, in turn, market share (77%).

The sector had the most balanced view when it came to achieving that digital-first goal, with 83% of them agreeing with the sentiment that despite technology being a driving force, people and the right skills set will be critical in driving organizations forward. It also led the pack when it came to understanding their current technology skill gap and being committed to a continuous learning cycle (77%).

When it comes to understanding their skills gap, the financial services sector is the most cognizant of the impact from the proliferation of cloud services, with 69% saying the growing variety of technology available is making it harder to keep their technology skills up to date.

Going forward, when assessing their current skills priorities, the industry is looking to hire talent that aligns to their business strategy (36%), followed by talent that will help solve their organization's immediate problems (29%), future technology stack updates (27%) and relevancy for future business development (27%).

Manufacturing

The challenge the manufacturing industry faces is predominantly that of obsolescence-based technical debt. Respondents from this sector are the least concerned by the impact of organizational debt but most concerned by the issues technical debt creates.

Along with the financial services sector, manufacturing respondents were most likely to report suffering from unnecessary costs due to their organization's dependency on old technology. With the historically high price tag associated with manufacturing technology, along with the rapid pace of change in the market, software and technologies are becoming unfit for new conditions.

That's why the ability to innovate at speed is of such importance to the manufacturing industry – organizations need to continually modernize operations to remain relevant. So, it tracks that the top fear for respondents when it comes to organizational debt is the way it inhibits innovation (38%).

It's clear the manufacturing industry is keen to transform at pace and be agile as a sector but is being held back by legacy technology. If their businesses could rid themselves of their technical debt, the top perk manufacturing respondents would hope to achieve is greater organizational agility (36%) followed by the opportunity to reduce security risk (35%).

However, the sector is so caught up in their present challenges, this may be hard to achieve. When asked about their skills priorities when hiring, the need for skills to solve immediate problems topped the list at 33%, followed by skills to cater to customer demand for new products and services (28%).

Manufacturing is also disproportionately more impacted by cybersecurity (31%) and digital strategy (31%) skills shortages. And of all the sectors, crisis management skills shortages were most acutely felt by manufacturing, possibly due to the knock-on effect a crisis can have on an entire supply chain.

Going forward, changes to talent and working practices made during the COVID-19 pandemic look set to continue, with priority placed on improving communication (45%) and automating processes (39%) via technology. Naturally, high priority was also placed on creating new workflows and processes to replace old, obsolete ones (41%).

Logistics and Transport

Unlike the manufacturing and finance industries, respondents from the logistics and transportation sector seem to suffer the least from obsolescence-based organizational debt (37%).

This response might be why the industry wastes significantly less time accounting for organizational debt relative to other sectors, spending just 1.5 hours extra on average for each hour they spent developing new products and services.

However, the absence of the usual organizational and technical gripes we heard from other industry respondents may also speak to a general lack of innovation within the industry. On this point, it's notable that individuals from this sector were most likely to respond that competitive advantage is something modern technology could give their business (39%). It speaks to an awareness of the digitally underdeveloped nature of the industry and the business potential this has.

This lack of focus on innovation may also explain why the logistics and transportation industry is the least likely to agree with the merits of implementing digital-first business processes (53%). And it's a similar story when it comes to the skills gap – the industry both understands it the least and is the least committed to solving it.

So, it's no surprise they were least likely to have a plan to bring their business processes in line with their digital transformation, increase the amount of automation within their business or invest in workflow technology.

But with modernization forcing its way through the door as a result of the pandemic, this may all be changing. Communications and remote working technology, upskilling or reskilling existing employees (both 39%) and creating new workflows and processes to replace old ones (37%) were the top three priorities of respondents looking forward.

And with the sector experiencing reportedly some of the most severe skills shortages in cybersecurity, digital strategy and business development across all industries, businesses that are quick to react will likely take up a lot of competitive ground.

Retail

More than most other sectors, retail understands that for its business strategy to be successful, it needs to eradicate its long-established organizational processes (73%). And the disruption caused by the COVID-19 pandemic on bricks-and-mortar establishments has intensified the need to re-engineer processes. Retail respondents were most likely to report needing to upskill or reskill existing employees to accommodate the business changes that happened overnight.

These challenges explain why, while the inability to transform at pace was considered the biggest risk in the speed of transformation across other industries, for retail, it is a reduced ability to use advanced analytics. Similarly, while organizational agility was the top opportunity for technology modernization on average across industries, gaining a competitive advantage topped the list of perks for retail respondents (38%). It highlights the mounting pressure retail faces to become more data-driven to respond to customers' demands faster.

So, it's unsurprising that retail respondents were some of the most likely to agree that while complex and difficult to implement, becoming digital-first is essential. Yet, while the sector values technology in the mission to becoming digital-first, it's also one of the least likely to agree with the merits of accelerating development through the upskilling, reskilling and the hiring of new talent.

However, maybe the fact that retail respondents were the second most likely to agree (84%) that becoming a digital-first organization requires investments in software and skills to be matched with the autonomy and opportunity to innovate, explains why employees' capabilities development is deemed less of a priority. The sector may view it as a cultural shift as well as a skills one.

The retail industry appears stuck between its desire to be faster and more responsive, and the real-world limitations placed on them by their outdated technologies and policies. It's a tug-of-war that legacy systems seem to be winning in a lot of respects. For instance, retail respondents were the least likely to agree that they've experienced significant productivity improvements from implementing new business processes.

That said, the good news is most retail respondents say they have a strategy in place to bring their business processes in line with their digital transformation (61%). And the sector was second most likely to agree with the notion that increasing automation within their business processes and investing in workflow technologies is the way to achieve this (81%).

It's clear that keeping customers happy by updating its technology is a key strategy for retail, as future technology stack updates (29%) and meeting customer demand for new products and services (29%) were high on its list of skills priorities.

But if retail wants to truly realize their transformation aspirations, it's clear it will need to close its digital strategy skills gap, as it was identified as having the most acute impact on the business by far – 42% vs the industry average of 28%.

Public sector

Respondents from the public sector were most likely to bemoan their current technology systems, with 52% agreeing that outdated systems somewhat or significantly slowed their organization's pace – the most of any industry. Organizational debt was also particularly bad in this sector, with teams working an additional 2.5 hours on average for every hour they spent on a new idea or way of working.

If organizations within the industry were to modernize their technology, almost a third (29%) of respondents cited both reducing security risk and improving employee well-being as the opportunities they would most hope to attain.

However, public sector respondents were also the least likely to agree with the notion that organizations that don't prioritize technology investment are at risk of losing customers (59%), indicating an industry-wide awareness of its subpar state of innovation. This sense of inconsequence stretched into their approach to the technology skills gap, as public sector respondents were most likely to dispute the idea that keeping pace with customer demand requires their organization to accelerate development capabilities through upskilling, reskilling and hiring new talent.

The pressure to digitally transform seems to be felt less in the public sector too. Much like respondents from logistics and transportation, the public sector was least likely to agree that to truly become a digital-first organization, they need to match investment in software and skills with autonomy and opportunity to innovate (61%). The sector ranked similarly high on the issue of not having the skills in place to support initiatives to become a digital-first organization (53%).

Even the introduction of remote working, which came about due to the pandemic forcing organizations to modernize some of their business processes, seems to have had the least impact on the public sector, potentially because it's such a frontline-heavy industry.

And surprisingly, despite the significant amount of time being wasted on organizational debt, public sector respondents were least likely to agree that their organizations needed to invest in workflow technologies to get things done with greater speed and efficiency (57%).

Predictably, industry standards regulation was most important for public sector respondents when it came to assessing skills priorities (24%). Looking ahead to a post-pandemic world, there's relative agreement with regards to all changes to talent and working practices that they'd like to continue after the pandemic (between 33% and 27%), but hybrid working and focusing on new talent topped the list (both 33%).

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Conclusion & recommendations

Organizational complexity is a pervasive force, like erosion; you can barely perceive it's happening until it's too late. At which point it becomes incredibly hard to get under control. As you've surmised from our research into two of the key sources of complexity businesses must deal with – organizational and technical debt – there are subtle, yet severe consequences to letting them fester.

But as the word implies, freeing a business from the constraints caused by these debts is incredibly complicated work. But it's work that must be done, because as we've seen again and again, whether it's in the time being spent trying to eradicate these debts or the resources wasted accounting for them in day-to-day operations, the cost of complexity only gets higher with time. What's more, the benefits of addressing technical and organizational debt include everything from improved agility, reduced security risk and an increase in competitive advantage.

So, if businesses and government organizations want to stop trudging through the marshes of complexity and become nimble, digital-first and adaptive a concerted and sustained effort needs to be put into addressing these debts. While it might seem like an arduous and hard-fought process, the consequences of not overcoming your organization's complexities and legacies quickly will be far more serious if you do nothing at all.

Four takeaways to help you build a more adaptive organization:

1. Unaddressed technical debt is a recipe for irrelevance

Unaddressed technical debt can jeopardize any organization's survival, leaving you open to cyberattacks and causing the very real risk of falling behind industry disruptors and competitors. COVID-19 has highlighted the importance of removing points of failure and building resilience into the very fabric of an organization's infrastructure, processes and supply chains.

Legacy systems don't lend themselves to creating enterprise adaptability, being able to make fast decisions based on current data or being responsive to changing customer needs and delivering new experiences. Legacy systems also exhaust valuable time, finances and resource. Organizations need to shift from keeping the lights on and move towards innovation in order to drive growth. But this can only be achieved by dismantling the ball and chain.

2. Organizational debt can create a burning platform

Organizational debt, like technical debt, has accumulated and expanded over the years as businesses have grown – and it's now regarded by many as the elephant in the room. However, there is at least an awareness that it needs addressing. But what's more complex is exactly how to go about this, as organizational debt can't be tackled without also overcoming technical debt.

Organizational debt creates operational issues and inhibits digital transformation, which results in inefficiencies and removes the ability to react at pace. It also frustrates employees with drawn-out processes and red tape, which can be a barrier to attracting new talent. Technology is the key to overcoming this and by becoming an adaptive enterprise, organizations can innovate, respond to the market and ultimately keep up with competitors, as well as changeable customer and employee demands.

3. People power adaptive enterprises

Becoming adaptive is key to remaining relevant and keeping up with the market. People play a pivotal role and an adaptive workforce is more able to innovate and capture opportunities. Part and parcel of this requires collaborative innovation, or co-creation, to fill immediate gaps – building technical literacy for the mid-term and paying it forward for sustainable skills development.

On the journey to becoming adaptive, it's also vital to adopt the necessary tools and put them in the hands of your people, to allow for greater collaboration and cross-functional teams. Perhaps more significantly, however, organizations must strive to foster a culture that is open to change. Failure to do so can hinder any attempts to create an adaptive workforce.

4. Processes should be automated and data-driven

In today's digital-first world, data must flow throughout any organization that has ambitions to be more adaptive. Data and automation together are the key to driving enhanced decision-making and actionable insights, which empower people, teams and businesses to build efficient, intelligent operations.

Effective use of data and automation enables organizations to act at pace and respond quickly to challenges and, more importantly, opportunities. Used iteratively, data is vital for businesses to be able to monitor and keep pace with continuous change. But a failure to use data effectively and ensure all of the necessary people have access to the right data can hinder innovation and the ability to face disruptors head on.

Our transformation experts, partner ecosystem and end-to-end services can help you accelerate your move from crisis management and immediate resilience brought about by the global pandemic, to building a more future-ready and adaptive organization.

Discover more and accelerate your move from 'fragile to agile':

fujitsu.com/global/themes/adaptive